

Utah Water Supply Outlook Report

January, 2007



**Steel Creek Park SNOTEL, December 2006, north slope of the Uinta Mountains.
Photo by Ray Wilson, NRCS, USDA .**

Water Supply Outlook Reports

and Federal - State - Private Cooperative Snow Surveys

For more water supply and resource management information, contact:

Snow Survey Staff, 245 N Jimmy Doolittle Rd, SLC Utah, 84041 - Phone: (801)524-5213

Vane O. Campbell, Area Conservationist, 340 N. 600 E., Richfield, UT 84701 - Phone: (435) 896-6441

Kerry Goodrich, Area Conservationist, 2871 S Commerce Way, Ogden UT 84401 (801)629-0575

Barry Hamilton, Area Conservationist, 540 W, Price River Dr. Price, UT 84501-2813 - Phone: (435) 637-0041

Internet Address: <http://www.ut.nrcs.usda.gov/snow/>

How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snowcourses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

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STATE OF UTAH GENERAL OUTLOOK

Jan 1, 2007

SUMMARY

It is snowing outside as we begin the water supply outlook reports for 2007, visibility is less than a quarter mile and the large fluffy flakes are piling up ready for the shovel. This is a very welcome sight even with the prospect of some hard labor later as conditions have been relatively dry for snow accumulation this season. October got the ball rolling in style with precipitation ranging from 116% to 242% of average which brought soil moisture values across the state up substantially. November wasn't too bad with precipitation in the 90% range but mild temperatures seemed to slow significant snow accumulation even at higher elevations. December continued the slide with precipitation near 69% of average and snowpacks that are below average. After a great start, soil moisture values have been steady to slightly decreasing over the past few months but for the most part are still in excellent condition. The Bear and the Weber Rivers are in particularly good shape at 67% and 62% of saturation. The Provo, Uintahs, southeast Utah and the Sevier are all between 40% and 50% of saturation. Southwest Utah has the lowest soil moisture condition at 33% of saturation, much less than the remainder of the state. Snowpacks range from 69% over southeastern Utah to near 80% of average on the Bear, Weber, Sevier and southwest Utah. The Provo watershed has snowpacks near 73% of normal. This is about 71% of the snowpack of last year. Precipitation for December ranged from 60% on the Provo Basin to 118% over southwest Utah. This brings the seasonal precipitation, (Oct-Dec) to 103%. Reservoir storage ranges from 34% on the Bear to 89% of capacity on the Provo. Statewide reservoir storage is at 67% of capacity, down 6% from last year. The Bear River basin has relatively poor reservoir storage at 34% but is significantly improved from years past. In general, most areas of the state have excellent reservoir carryover. General water supply conditions range from below to near average. Streamflow forecasts range from 52% to 91% of average. Surface Water Supply Indices range from 23% on the Bear River, to 84% on the west side of the Uintah Basin.

SNOWPACK

January first snowpacks as measured by the NRCS SNOTEL system range from 69% in southeast Utah to 89% on the Uintahs. The Bear, Weber, Sevier and southwest Utah area all near 80% and the Provo is at 73% of average. To reach average conditions by April 1, we need 110% to 120% of average accumulation. The probability of getting this accumulation ranges between 25% and 42%. It is very early in the snow accumulation year and any outcome is possible.

PRECIPITATION

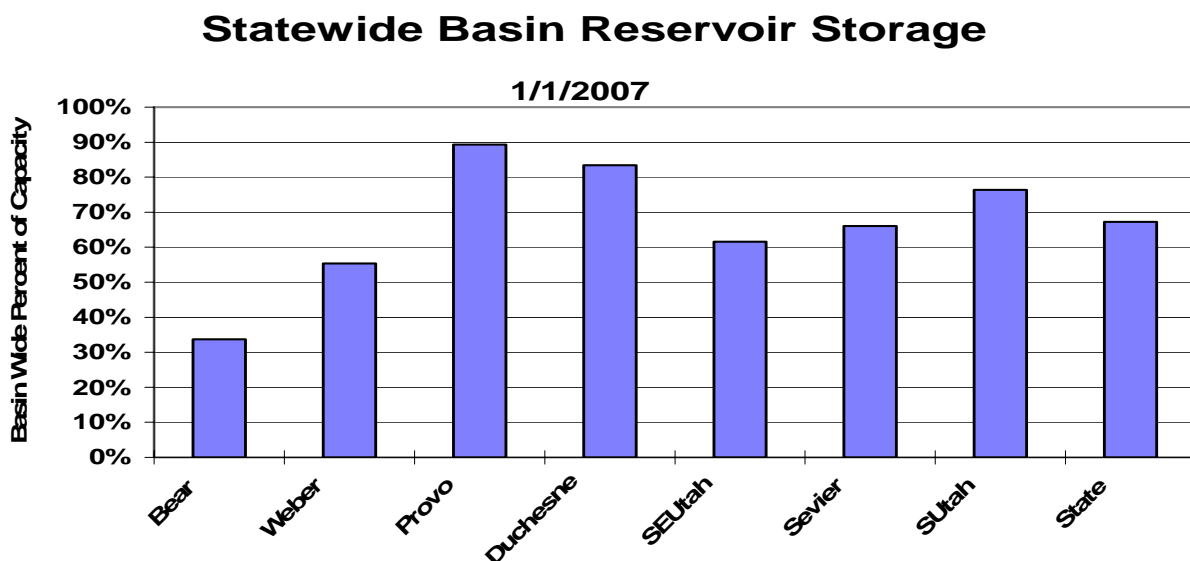
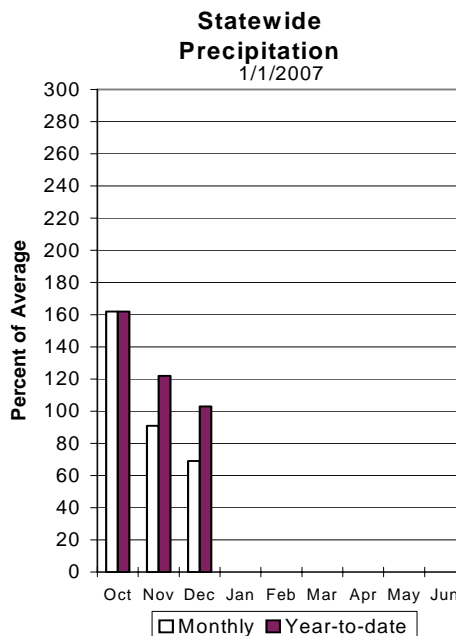
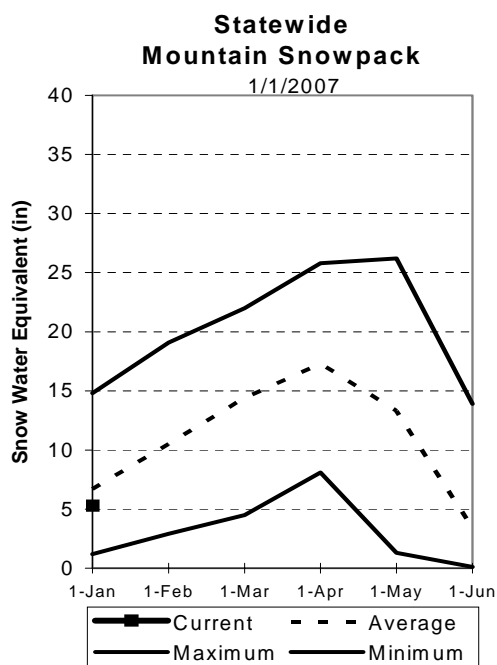
Mountain precipitation during December was much below normal at 69% of average statewide. Precipitation was lowest over northern Utah (60%-64%) and highest over southern areas (67%-118%). This brings the seasonal accumulation (Oct-Dec) to 103% of average statewide and ranges from 92% on the Bear to 123% over southeastern Utah.

RESERVOIRS

Storage in 41 of Utah's key irrigation reservoirs is at 67% of capacity. This is an increase of 2% from last year. Reservoirs across the State have been making steady gains in storage. Bear Lake really is the last reservoir to remain in an extremely low condition due to the prolonged drought.

STREAMFLOW

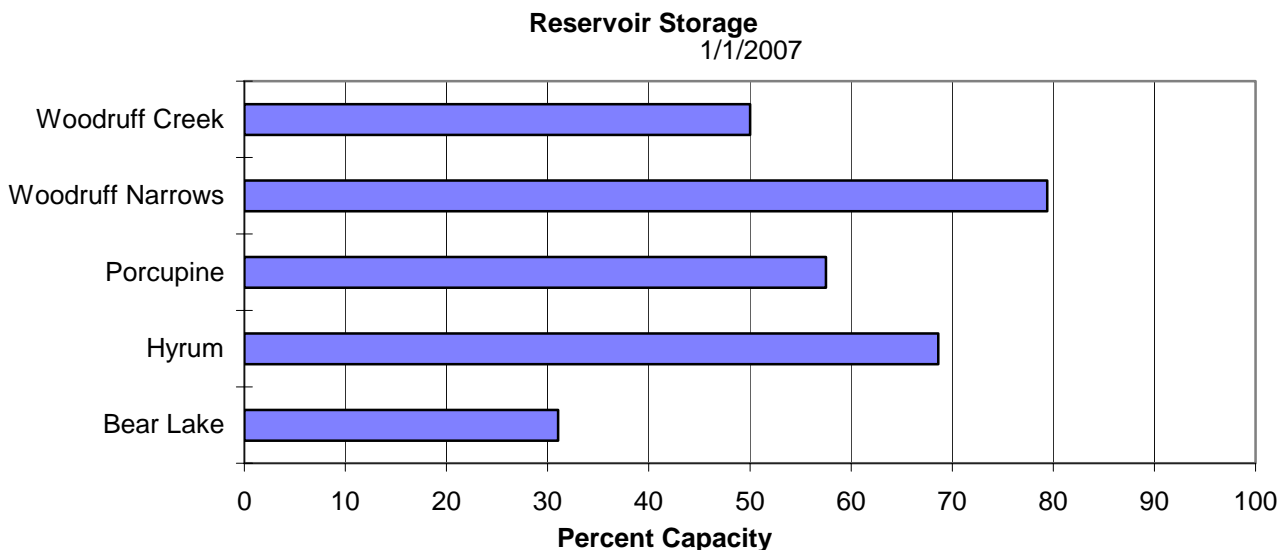
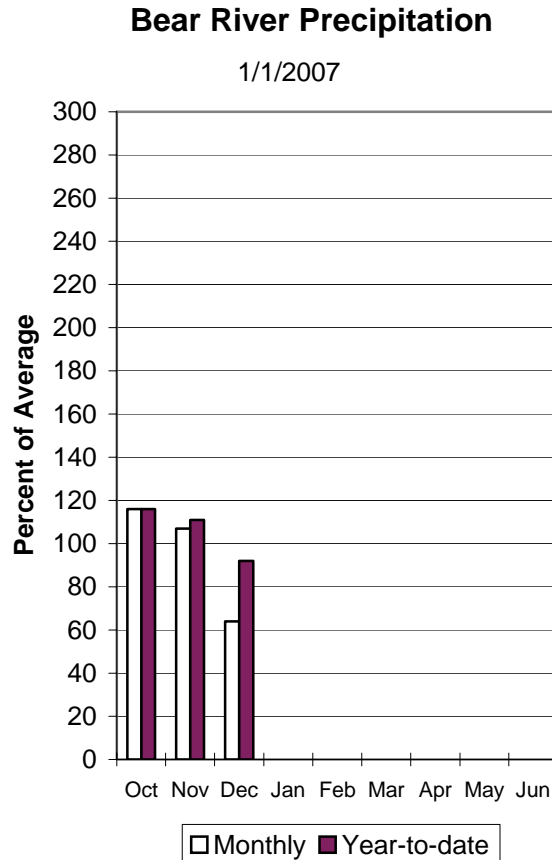
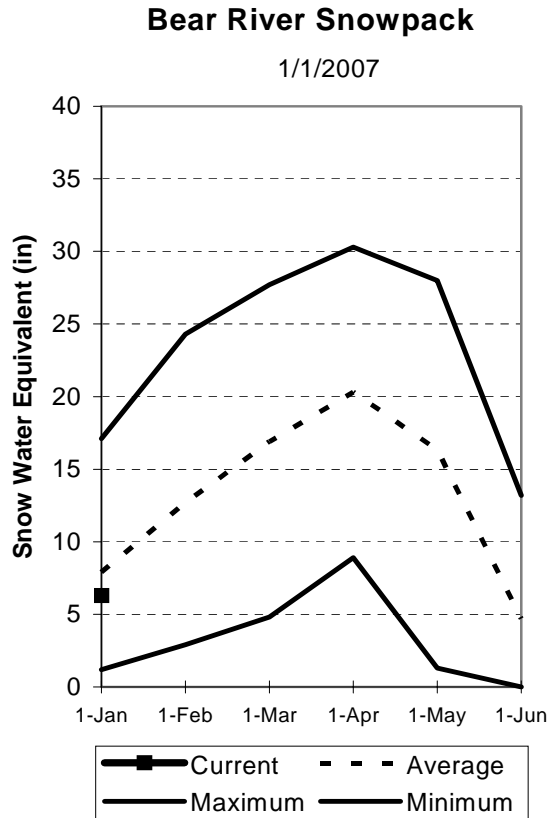
Snowmelt streamflows are expected to have a wide range from much below average to near average across the state of Utah this year. Forecast streamflows range from 52% on the Beaver River to 91% of average for South Willow Creek nr Grantsville and Big Brush Creek abv Red Fleet. Most flows are forecast to be in the 60% to 85% range.



Bear River Basin

January 1, 2007

Snowpacks on the Bear River Basin are below average at 80% of normal, about 57% of last year. Specific sites range from 58% to 100% of normal. December precipitation was much below average at 64%, which brings the seasonal accumulation (Oct-December) to 92% of average. Soil moisture levels in runoff producing areas are at 67% of saturation in the upper 2 feet of soil compared to 55% last year. This is due mainly to above average precipitation in October. Forecast streamflows range from average to above average (65%-88%) volumes this spring. Reservoir storage is low at 34% of capacity, 12% more than last year. The Surface Water Supply Index is at 23% for the Bear River, or 77% of years have had more total water available. Water supply conditions are much below normal due to low reservoir storage but have been improving over the last three years.



BEAR RIVER BASIN
Streamflow Forecasts - January 1, 2007

		<<===== Drier ===== Future Conditions ===== Wetter =====>						
Forecast Point	Forecast Period	=====		Chance Of Exceeding *		=====		30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
Bear River nr UT-WY State Line	APR-JUL	84	107	100	89	139	162	113
Bear River ab Reservoir nr Woodruff	APR-JUL	89	126	110	81	176	213	136
Big Creek nr Randolph	APR-JUL	0.5	1.9	3.3	67	5.0	8.4	4.9
Smiths Fork nr Border	APR-JUL	51	71	85	83	103	131	103
Bear River at Stewart Dam	APR-JUL	71	116	165	71	195	265	234
Little Bear River at Paradise	APR-JUL	16.2	27	30	65	46	64	46
Logan R Abv State Dam Nr Logan	APR-JUL	46	69	87	69	106	139	126
Blacksmith Fk Abv Up&L Dam Nr Hyrum	APR-JUL	22	33	38	79	52	69	48

BEAR RIVER BASIN Reservoir Storage (1000 AF) - End of December					BEAR RIVER BASIN Watershed Snowpack Analysis - January 1, 2007			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
BEAR LAKE	1302.0	404.0	251.8	---	BEAR RIVER, UPPER (abv Ha	6	59	81
HYRUM	15.3	10.5	10.4	10.2	BEAR RIVER, LOWER (blw Ha	8	55	79
PORCUPINE	11.3	6.5	8.7	3.9	LOGAN RIVER	4	53	78
WOODRUFF NARROWS	57.3	45.5	30.0	23.6	RAFT RIVER	1	77	134
WOODRUFF CREEK	4.0	2.0	2.1	---	BEAR RIVER BASIN	14	57	80

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

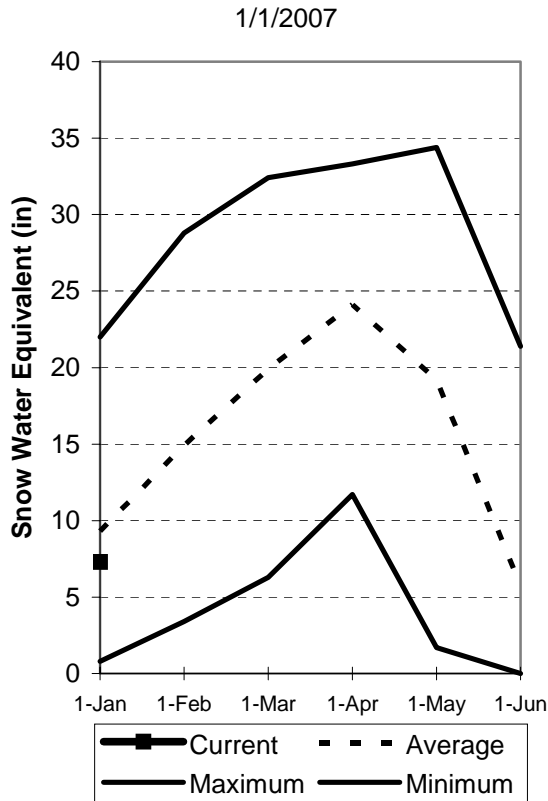
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

Weber and Ogden River Basins

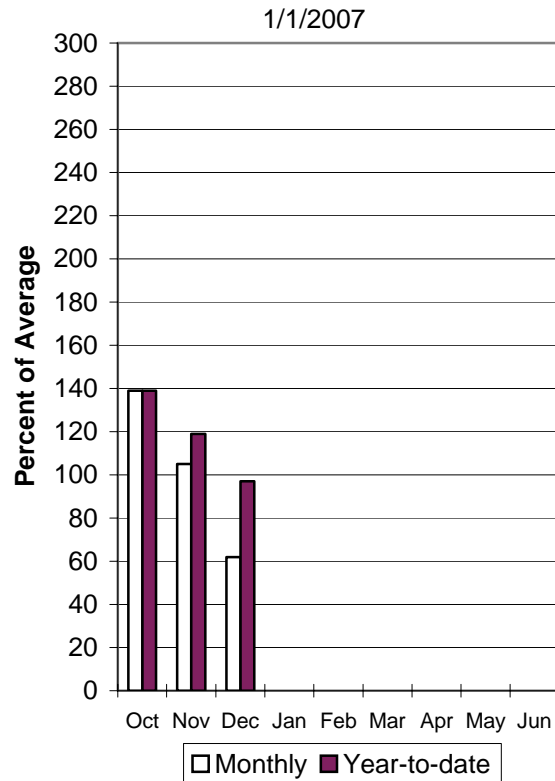
January 1, 2007

Snowpack on the Weber and Ogden Watersheds is below average at 79%, about 59% of last year. Individual sites range from 53% to 99% of average. December precipitation was much below average at 62% bringing the seasonal accumulation (Oct-December) to 97% of average. Soil moisture levels in runoff producing areas are at 62% of saturation in the upper 2 feet of soil compared to 52% last year. Streamflow forecasts range from 75% to 89% of average. Reservoir storage is at 55% of capacity, 15% lower than last year. The Surface Water Supply Index is at 32% for the Weber River and at 37% for the Ogden River. Overall water supply conditions are below normal.

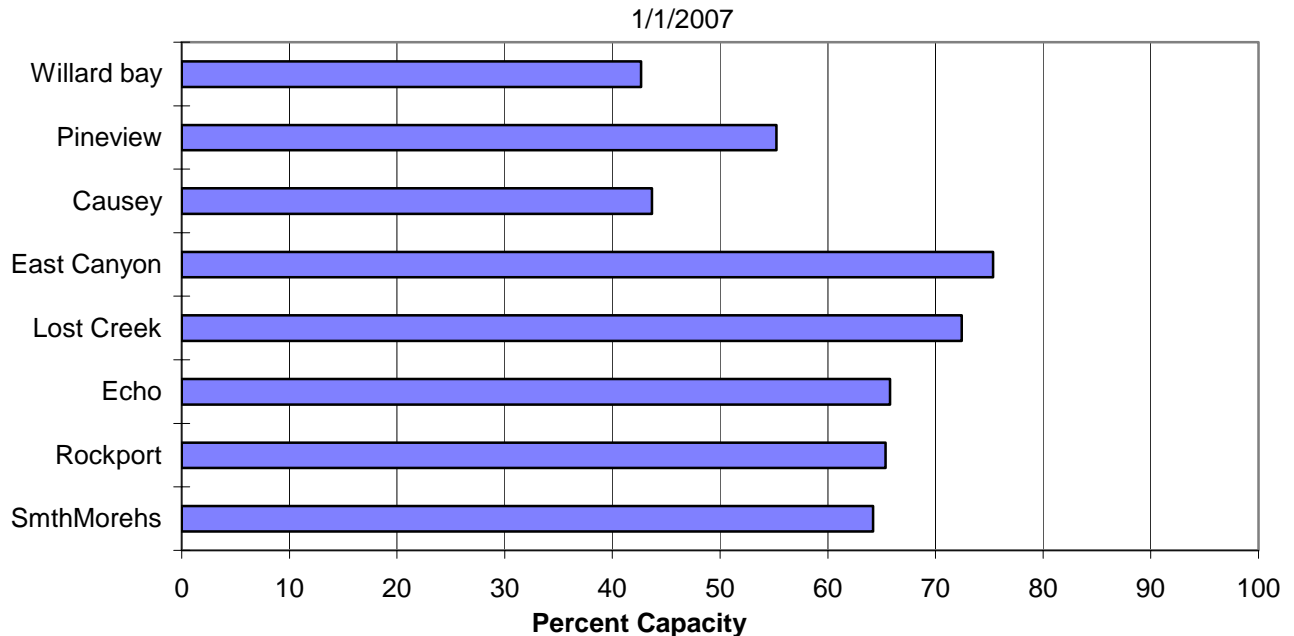
Weber River Snowpack



Weber River Precipitation



Reservoir Storage



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WEBER & OGDEN WATERSHEDS in Utah
Streamflow Forecasts - January 1, 2007

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Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		=====		Chance Of Exceeding *		=====		
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
=====								
Smith & Morehouse Res inflow	APR-JUL	22	29	29	85	38	45	34
Weber River nr Oakley	APR-JUL	82		105	85	139	163	123
Rockport Resv Inflow Nr Wanship	APR-JUL	78	110	108	81	153	185	134
Weber River nr Coalville	APR-JUL	79	113	111	81	159	193	137
Chalk Creek at Coalville	APR-JUL	19.4	31	40	89	50	67	45
Echo Reservoir inflow	APR-JUL	121	161	145	81	217	257	179
Lost Creek Reservoir inflow	APR-JUL	5.0	9.3	14.0	80	17.3	25	17.6
East Canyon Reservoir inflow	APR-JUL	10.6	18.1	24	77	31	44	31
Weber River at Gateway	APR-JUL	233	316	285	80	428	510	355
SF Ogden River nr Huntsville	APR-JUL	25	38	48	75	59	78	64
Pineview Reservoir inflow	APR-JUL	58	92	100	75	137	171	133
Wheeler Creek nr Huntsville	APR-JUL	2.0	3.5	4.7	75	6.2	8.6	6.3

WEBER & OGDEN WATERSHEDS in Utah Reservoir Storage (1000 AF) - End of December					WEBER & OGDEN WATERSHEDS in Utah Watershed Snowpack Analysis - January 1, 2007			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CAUSEY	7.1	3.1	3.3	2.8	OGDEN RIVER	4	55	68
EAST CANYON	49.5	37.3	35.1	34.9	WEBER RIVER	9	62	85
ECHO	73.9	48.6	50.0	47.9	WEBER & OGDEN WATERSHEDS	13	60	79
LOST CREEK	22.5	16.3	15.3	14.1				
PINEVIEW	110.1	60.8	52.3	52.9				
ROCKPORT	60.9	39.8	38.1	36.2				
WILLARD BAY	215.0	91.7	181.3	147.7				

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

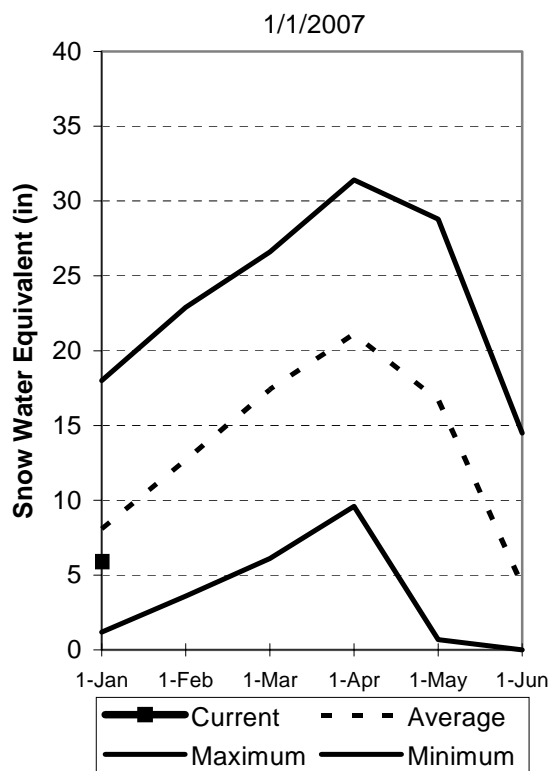
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Utah Lake, Jordan River & Tooele Valley Basins

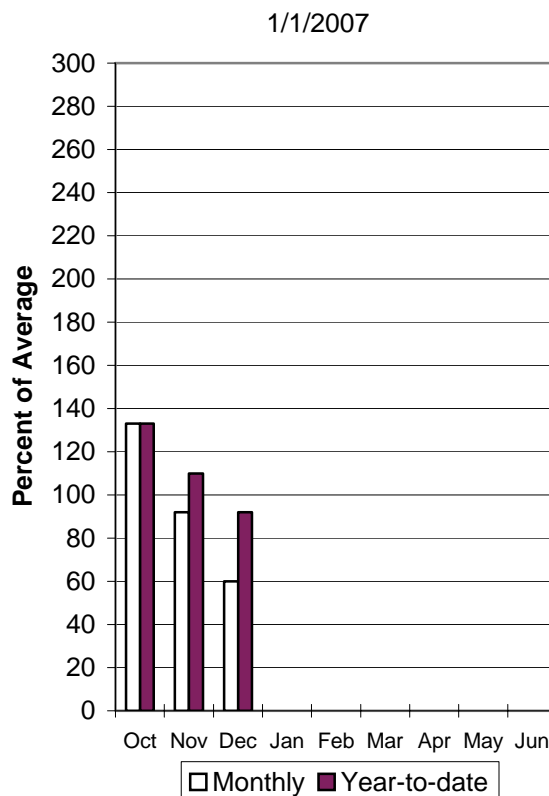
January 1, 2007

Snowpacks over these watersheds are below average at 73%, 59% of last year. Individual sites range from 27% to 113% of average. December precipitation was much below average at 60%, bringing the seasonal accumulation (Oct-Dec) to 92% of average. Soil moisture levels in runoff producing areas are at 50% of saturation in the upper 2 feet of soil compared to 43% last year. Forecast streamflows range from 58% to 91% of average. Reservoir storage is at 89% of capacity, 5% more than last year. The Surface Water Supply Index is at 64%, or only 36 in 100 years would have more total water available. General water supply conditions are above average.

Provo River Snowpack

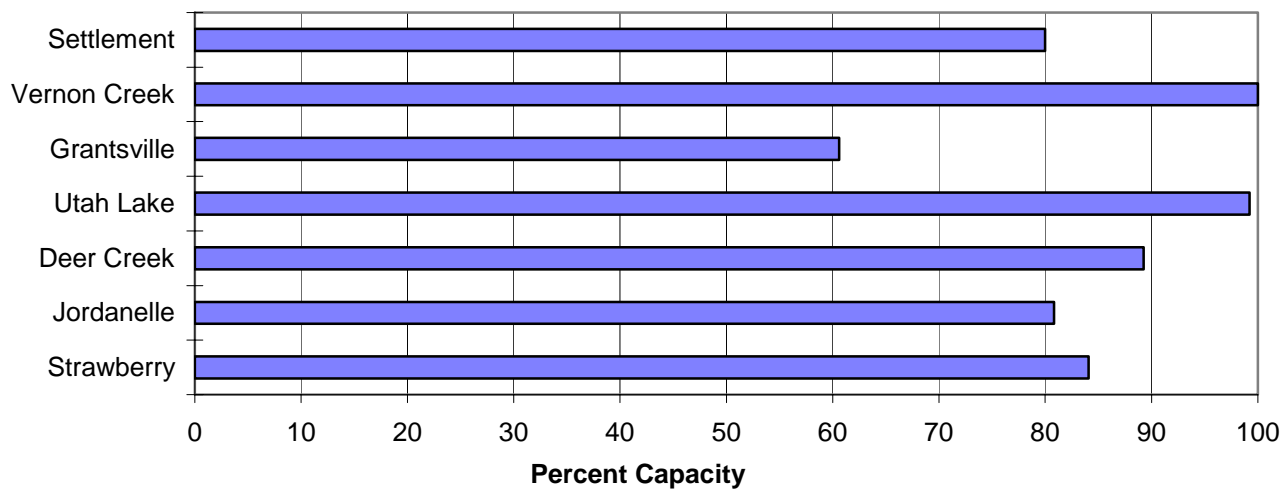


Provo River Precipitation



Reservoir Storage

1/1/2007



UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Streamflow Forecasts - January 1, 2007

		<<----- Drier ----- Future Conditions ----- Wetter ----->>						
Forecast Point	Forecast Period	Chance Of Exceeding *						30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
=====								
Spanish Fork River nr Castilla	APR-JUL	24	45	55	71	84	121	77
Provo River nr Woodland	APR-JUL	0.0	0.0	90	87	14.0	34	103
Provo River nr Hailstone	APR-JUL	59	80	95	87	114	143	109
Deer Creek Resv Inflow	APR-JUL	47	74	105	83	120	161	126
American Fk Abv Upper Powerplant	APR-JUL	12.0	19.4	25	78	32	44	32
Utah Lake inflow	APR-JUL	0.0	0.0	240	74	76	189	325
Little Cottonwood Ck nr SLC	APR-JUL	0.0	0.0	33	83	4.8	11.9	40
Big Cottonwood Ck nr SLC	APR-JUL	0.0	0.0	31	82	4.7	11.7	38
Mill Creek nr SLC	APR-JUL	2.9	4.1	5.1	73	6.1	7.9	7.0
Parley's Creek nr SLC	APR-JUL	4.9	8.7	12.0	72	15.5	22	16.7
Dell Fork nr SLC	APR-JUL	0.0	0.0	5.0	74	1.8	4.5	6.8
Emigration Creek nr SLC	APR-JUL	0.9	2.0	3.0	67	4.3	6.6	4.5
City Creek nr SLC	APR-JUL	3.9	5.7	7.2	83	8.8	11.4	8.7
Settlement Creek Abv Resv Nr Tooele		0.4	0.7	1.1	71	1.4	2.0	1.5
South Willow Creek nr Grantsville	APR-JUL	1.5	2.3	2.9	90	3.5	4.7	3.2

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Reservoir Storage (1000 AF) - End of December

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Watershed Snowpack Analysis - January 1, 2007

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
DEER CREEK	149.7	133.6	110.7	102.0	PROVO RIVER & UTAH LAKE	7	53	66
GRANTSVILLE	3.3	2.0	1.8	1.6	PROVO RIVER	4	49	65
SETTLEMENT CREEK	1.0	0.8	0.8	0.5	JORDAN RIVER & GREAT SALT	6	56	76
STRAWBERRY-ENLARGED	1105.9	930.0	836.0	640.0	TOOELE VALLEY WATERSHEDS	3	100	82
UTAH LAKE	870.9	864.0	841.1	756.5	UTAH LAKE, JORDAN RIVER &	16	59	73
VERNON CREEK	0.6	0.6	0.5	---				

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

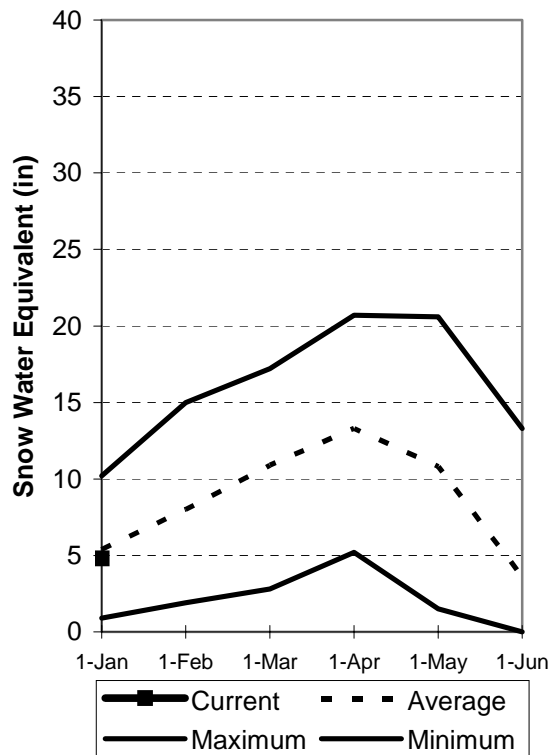
(2) - The value is natural volume - actual volume may be affected by upstream water management.

Uintah Basin and Dagget SCD's **January 1, 2007**

Snowpacks across the Uintah Basin and North Slope areas are below average at 89%, which is 83% of last year. The North Slope ranges from 62% to 141% and the Uintah Basin ranges from 69% to 101% of average. Precipitation during December was much below average at 64% bringing the seasonal accumulation (Oct-Dec) to 106% of average. Soil moisture values in runoff producing areas are at 44% of saturation in the upper 2 feet of soil compared to 35% last year. Reservoir storage is at 83% of capacity, 6% more than last year. The Surface Water Supply Index for the western area is 84% and for the eastern area it is 55% indicating above normal conditions on the west side and slightly above for the eastern area. Streamflow forecasts range from 76% to 91% of average. General water supply conditions range from above to near average from west to east with the excellent reservoir carryover.

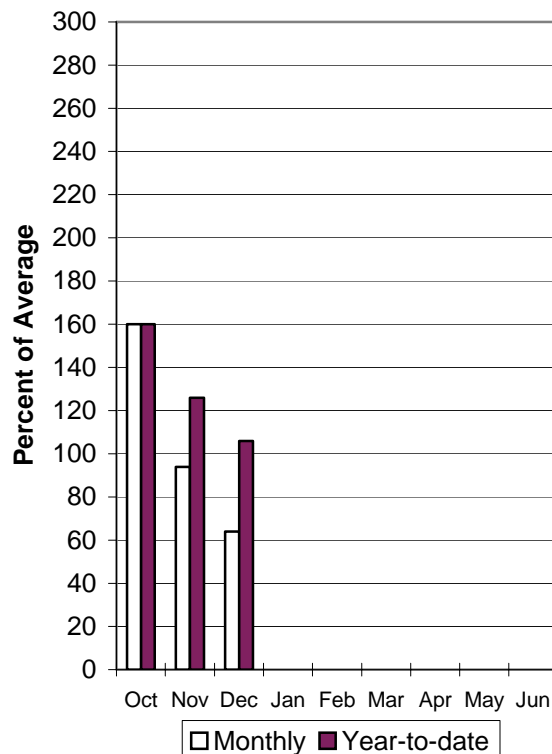
Uinta Snowpack

1/1/2007

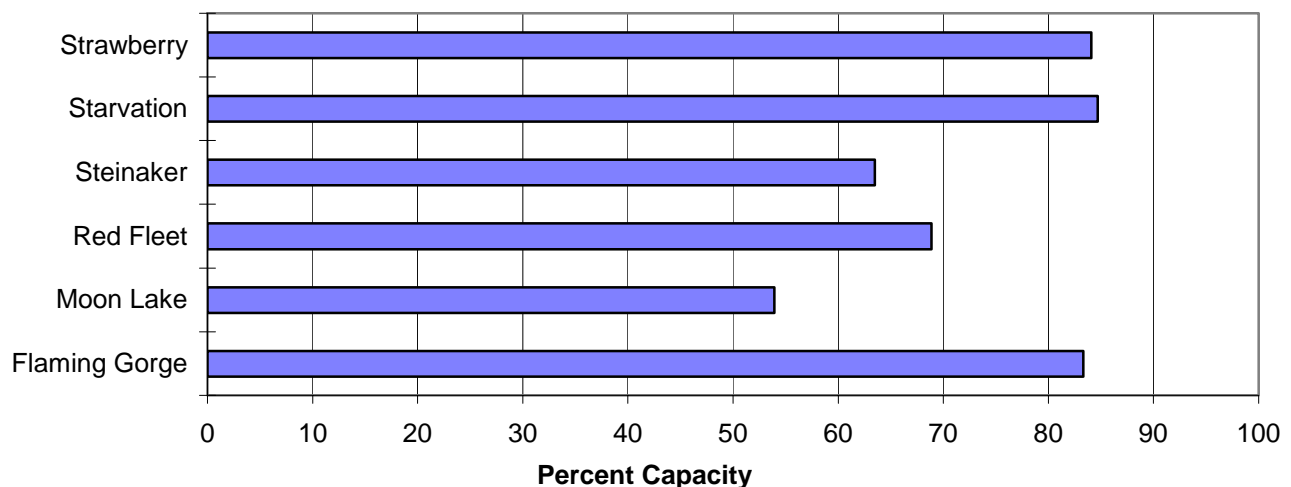


Uinta Precipitation

1/1/2007



Reservoir Storage
1/1/2007



UINTAH BASIN & DAGGET SCD'S Streamflow Forecasts - January 1, 2007								
Forecast Point	Forecast Period	<<----- Drier ----- Future Conditions ----- Wetter ----->>						
		=====		Chance Of Exceeding *		=====		30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
Blacks Fork nr Robertson	APR-JUL	53	70	83	87	97	119	95
EF of Smiths Fork nr Robertson	APR-JUL	14.8	20	24	83	28	35	29
Flaming Gorge Reservoir Inflow (2)	APR-JUL	486	717	900	76	1103	1440	1190
Big Brush Ck abv Red Fleet Resv	APR-JUL	10.9	15.5	19.0	91	23	29	21
Ashley Creek nr Vernal	APR-JUL	26	38	47	90	57	74	52
WF Duchesne River nr Hanna (2)	APR-JUL	11.3	16.2	20	83	24	31	24
Duchesne R nr Tabiona (2)	APR-JUL	49	70	86	82	104	133	105
Upper Stillwater Resv Inflow	APR-JUL	49	63	73	89	84	102	82
Rock Ck nr Mountain Home (2)	APR-JUL	53	68	80	90	93	113	89
Duchesne R abv Knight Diversion (2)	APR-JUL	101	134	160	85	188	233	188
Strawberry R nr Soldier Springs (2)	APR-JUL	18.8	36	50	85	67	96	59
Currant Creek Reservoir Inflow (2)	APR-JUL	6.8	14.3	21	84	29	43	25
Strawberry R nr Duchesne (2)	APR-JUL	39	70	97	80	128	181	121
Lake Fork River Moon Lake Inflow	APR-JUL	42	54	62	91	71	86	68
Yellowstone River nr Altonah	APR-JUL	34	45	54	87	64	79	62
Duchesne R at Myton (2)	APR-JUL	77	149	210	81	282	407	260
Whiterocks near Whiterocks	APR-JUL	29	41	50	89	60	76	56
Duchesne R nr Randlett (2)	APR-JUL	95	183	260	80	350	507	324

UINTAH BASIN & DAGGET SCD'S Reservoir Storage (1000 AF) - End of December					UINTAH BASIN & DAGGET SCD'S Watershed Snowpack Analysis - January 1, 2007			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
FLAMING GORGE	3749.0	3124.0	3082.0	3027.0	UPPER GREEN RIVER in UTAH	6	110	97
MOON LAKE	49.5	26.7	29.2	26.1	ASHLEY CREEK	2	155	83
RED FLEET	25.7	17.7	21.2	17.5	BLACK'S FORK RIVER	2	80	94
STEINAKER	33.4	21.2	27.6	20.0	SHEEP CREEK	1	236	114
STARVATION	165.3	140.0	135.4	128.6	DUCHESNE RIVER	11	75	85
STRAWBERRY-ENLARGED	1105.9	930.0	836.0	640.0	LAKE FORK-YELLOWSTONE CRE	4	74	89
					STRAWBERRY RIVER	4	70	77
					UINTAH-WHITEROCKS RIVERS	2	95	88
					UINTAH BASIN & DAGGET SCD	17	83	89

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

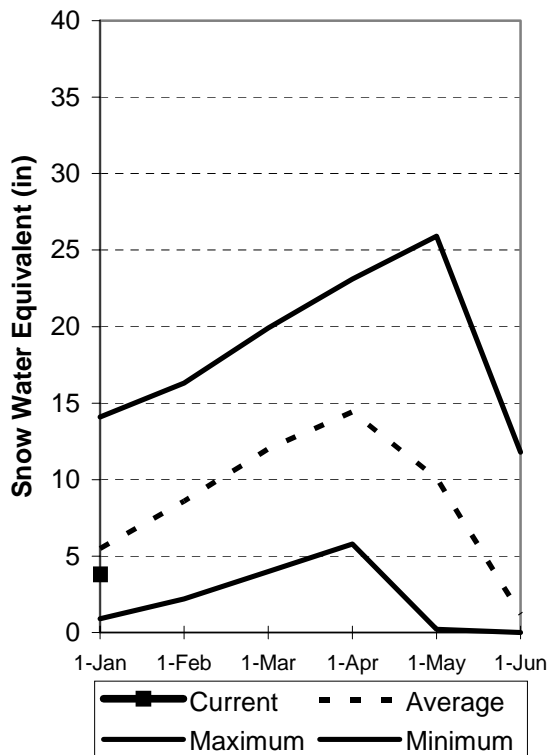
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 (2) - The value is natural volume - actual volume may be affected by upstream water management.

Carbon, Emery, Wayne, Grand and San Juan Co. January 1, 2007

Snowpacks in this region are much below normal at 68% of average, about 75% of last year. Individual sites range from 32% to 108% of average, with the Abajo Mountains the driest in the region. Precipitation during December was much below average at 67%, bringing the seasonal accumulation (Oct-Dec) to 123% of normal. Soil moisture estimates in runoff producing areas are at 51% of saturation in the upper 2 feet of soil compared to 32% last year and down 3% from last month. Forecast streamflows range from 26% to 100% of average, somewhat higher than snowpack conditions alone would indicate due to high fall precipitation and healthy soil moisture conditions. Reservoir storage is at 62% of capacity, down 5% from last year. Surface Water Supply Indices for the area are: Price 70%, San Rafael area 53% and Moab 54%. General runoff and water supply conditions are near to above normal, due to good reservoir carryover.

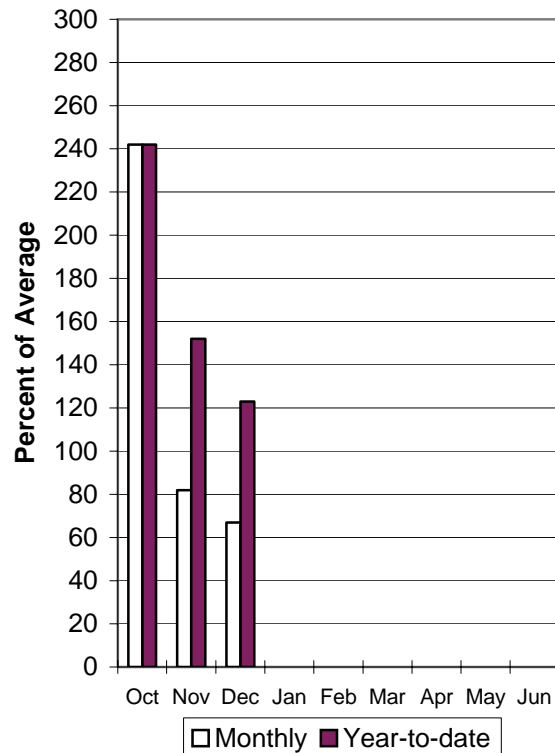
Southeast Utah Snowpack

1/1/2007



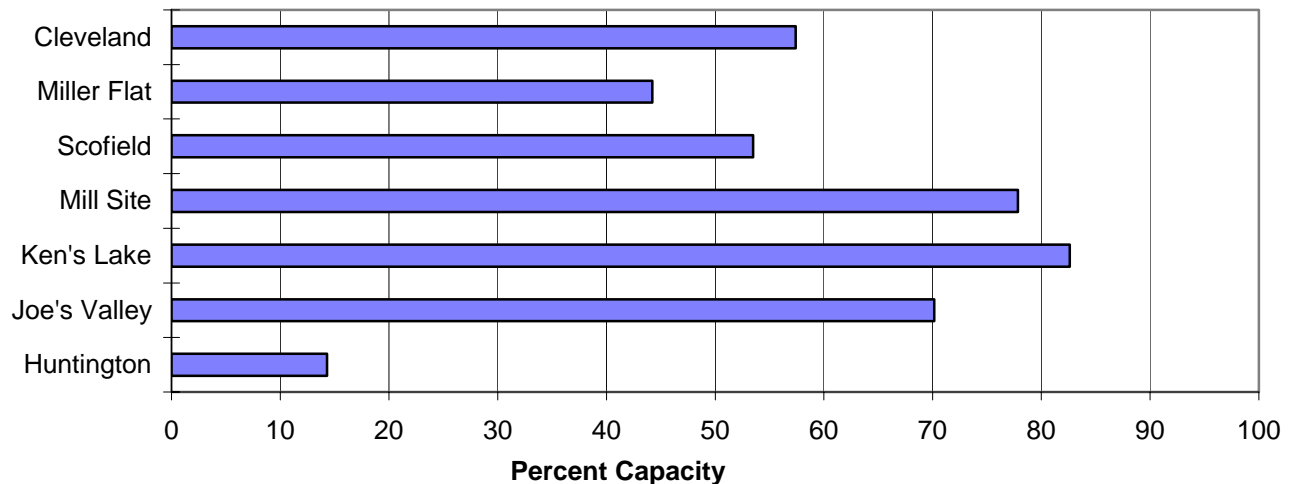
Southeast Utah Precipitation

1/1/2007



Reservoir Storage

1/1/2007



CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Streamflow Forecasts - January 1, 2007

		<<----- Drier ----- Future Conditions ----- Wetter ----->>						
Forecast Point	Forecast Period	=====		Chance Of Exceeding *		=====		30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	

Gooseberry Creek nr Scofield	APR-JUL	5.6	8.1	10.0	84	12.2	15.7	11.9
Price River near Scofield Reservoir	APR-JUL	15.6	30	39	87	49	62	45
White River blw Tabbyune Creek	APR-JUL	4.3	8.4	12.0	69	16.2	24	17.3
Green River at Green River, UT (2)	APR-JUL	980	1910	2550	80	3190	4120	3170
Huntington Ck Inflow to Electric Lk	APR-JUL	5.7	9.5	12.6	80	16.1	22	15.7
Huntington Ck nr Huntington	APR-JUL	15.2	29	39	80	49	63	49
Joe's Valley Resv Inflow	APR-JUL	26	38	48	83	59	76	58
Ferron Ck (Upper Station) nr Ferron	APR-JUL	20	28	34	87	41	52	39
Colorado River Near Cisco (2)	APR-JUL	2290	3700	4650	100	5600	7010	4650
Mill Creek at Sheley Tunnel nr Moab	APR-JUL	2.2	3.4	4.5	90	5.8	8.1	5.0
Seven Mile Ck nr Fish Lake	APR-JUL	4.3	5.8	7.0	100	8.3	10.3	7.0
Muddy Creek nr Emery	APR-JUL	9.7	14.4	18.0	91	22	29	19.9
North Ck ab R.S. nr Monticello	MAR-JUL	0.0	0.1	0.2	26	0.4	0.8	0.8
South Ck ab Lloyd's Res nr Monticell	MAR-JUL	0.0	0.2	0.5	33	0.8	1.7	1.4
Recapture Ck Bl Johnson Ck nr Blandi	MAR-JUL	0.3	1.2	2.3	46	4.0	7.7	5.0
San Juan River near Bluff (2)	APR-JUL	410	820	1100	89	1380	1790	1230

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Reservoir Storage (1000 AF) - End of December

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Watershed Snowpack Analysis - January 1, 2007

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
HUNTINGTON NORTH	4.2	0.6	2.4	2.4	PRICE RIVER	3	53	60
JOE'S VALLEY	61.6	43.2	43.4	41.0	SAN RAFAEL RIVER	3	64	72
KEN'S LAKE	2.3	1.9	2.0	1.0	MUDDY CREEK	1	64	69
MILL SITE	16.7	13.0	9.2	75.0	FREMONT RIVER	3	148	84
SCOFIELD	65.8	35.2	43.8	32.7	LASAL MOUNTAINS	1	100	81
					BLUE MOUNTAINS	1	225	32
					WILLOW CREEK	1	233	72
					CARBON, EMERY, WAYNE, GRA	13	75	68

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

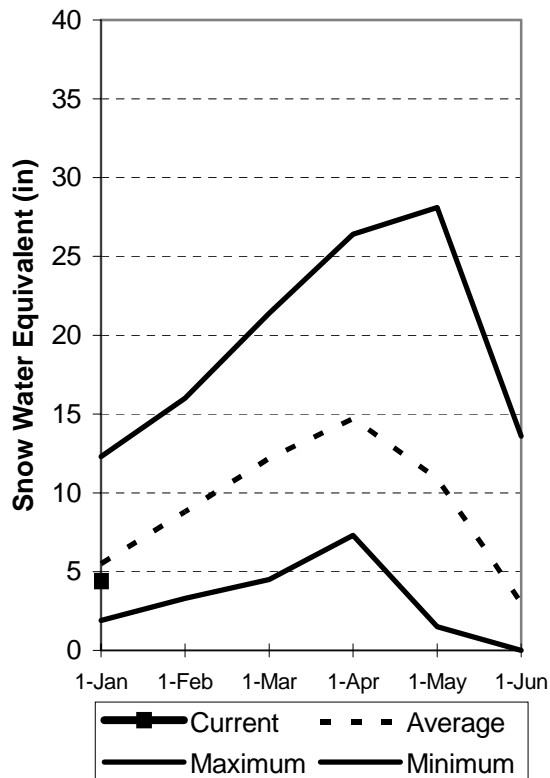
Sevier and Beaver River Basins

Jan 1, 2007

Snowpacks on the Sevier River Basin are below normal at 80% of average, about 108% of last year. Individual sites range from 60% to 150% of average. Precipitation during December was slightly below average at 88% of normal, bringing the seasonal accumulation (Oct-Dec) to 117% of average. Soil moisture estimates in runoff producing areas are at 46% of saturation (Sevier) in the upper 2 feet of soil compared to 44% last year. Streamflow forecasts range from 52% to 80% of average. Reservoir storage is at 66% of capacity, 11% less than last year. Surface Water Supply Indices are: Upper Sevier 71%, Lower Sevier 57% and Beaver 48%. Water supply conditions range from near to above average due to reservoir storage.

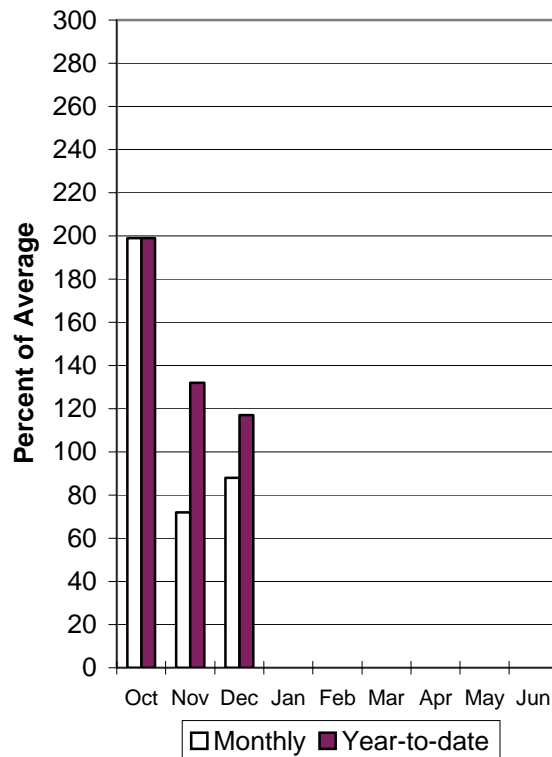
Sevier River Snowpack

1/1/2007



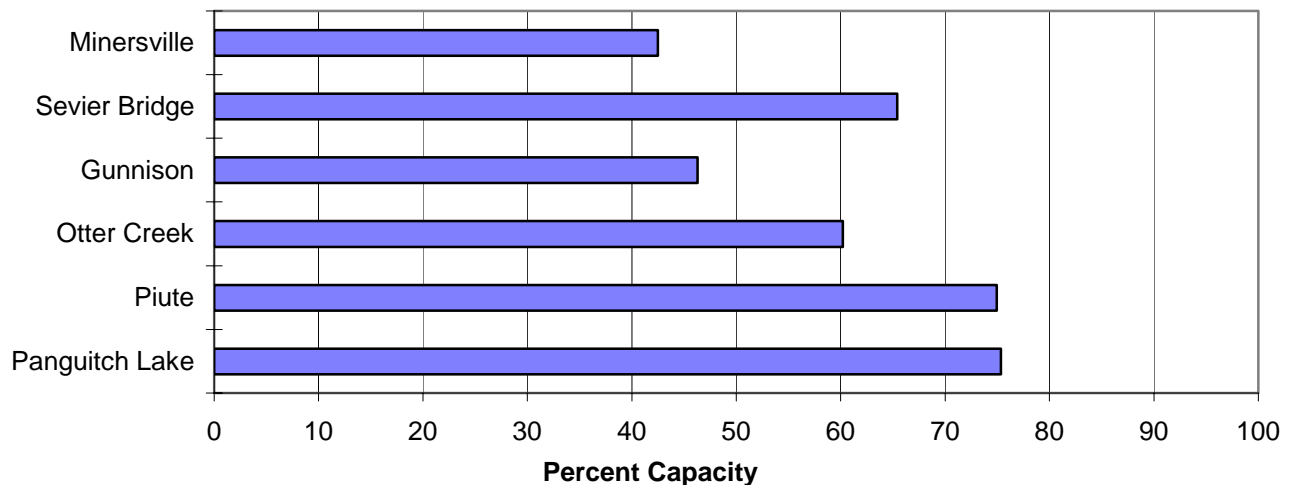
Sevier River Precipitation

1/1/2007



Reservoir Storage

1/1/2007



SEVIER & BEAVER RIVER BASINS
Streamflow Forecasts - January 1, 2007

		<<===== Drier ===== Future Conditions ===== Wetter =====>>						
Forecast Point	Forecast Period	=====		Chance Of Exceeding *		=====		30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
=====								
Sevier River at Hatch	APR-JUL	0.0	0.0	44	80	16.5	41	55
Sevier River nr Kingston	APR-JUL	39	61	71	80	98	130	89
EF Sevier R nr Kingston	APR-JUL	10.9	22	30	79	44	64	38
Sevier R blw Piute Dam	APR-JUL	13.0	39	105	83	98	158	126
Clear Creek Abv Diversions Nr Sevier	APR-JUL	9.7	15.2	19.7	90	25	33	22
Salina Creek at Salina	APR-JUL	3.4	9.2	15.0	76	22	35	19.7
Manti Ck Blw Dugway Ck Nr Manti	APR-JUL	9.9	13.8	13.2	72	20	26	18.3
Sevier R nr Gunnison	APR-JUL	0.0	0.0	220	79	84	209	280
Chicken Creek nr Levan	APR-JUL	0.5	1.7	2.9	64	4.4	7.2	4.5
Oak Creek nr Oak City	APR-JUL	0.4	0.9	1.3	80	1.8	2.7	1.7
Beaver River nr Beaver	APR-JUL	11.4	15.8	20	74	24	31	27
Minersville Reservoir inflow	APR-JUL	0.5	2.7	8.6	52	8.7	15.2	16.6

SEVIER & BEAVER RIVER BASINS
Reservoir Storage (1000 AF) - End of December

SEVIER & BEAVER RIVER BASINS
Watershed Snowpack Analysis - January 1, 2007

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
GUNNISON	20.3	9.4	11.6	10.9	UPPER SEVIER RIVER (south	8	156	83
MINERSVILLE (RkyFd)	23.3	9.9	18.2	12.7	EAST FORK SEVIER RIVER	3	156	84
OTTER CREEK	52.5	31.6	41.5	32.8	SOUTH FORK SEVIER RIVER	5	157	82
PIUTE	71.8	53.8	50.7	42.1	LOWER SEVIER RIVER (inclu	6	88	81
SEVIER BRIDGE	236.0	154.4	189.3	148.9	BEAVER RIVER	2	89	71
PANGUITCH LAKE	22.3	16.8	17.4	108.0	SEVIER & BEAVER RIVER BAS	16	110	80

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

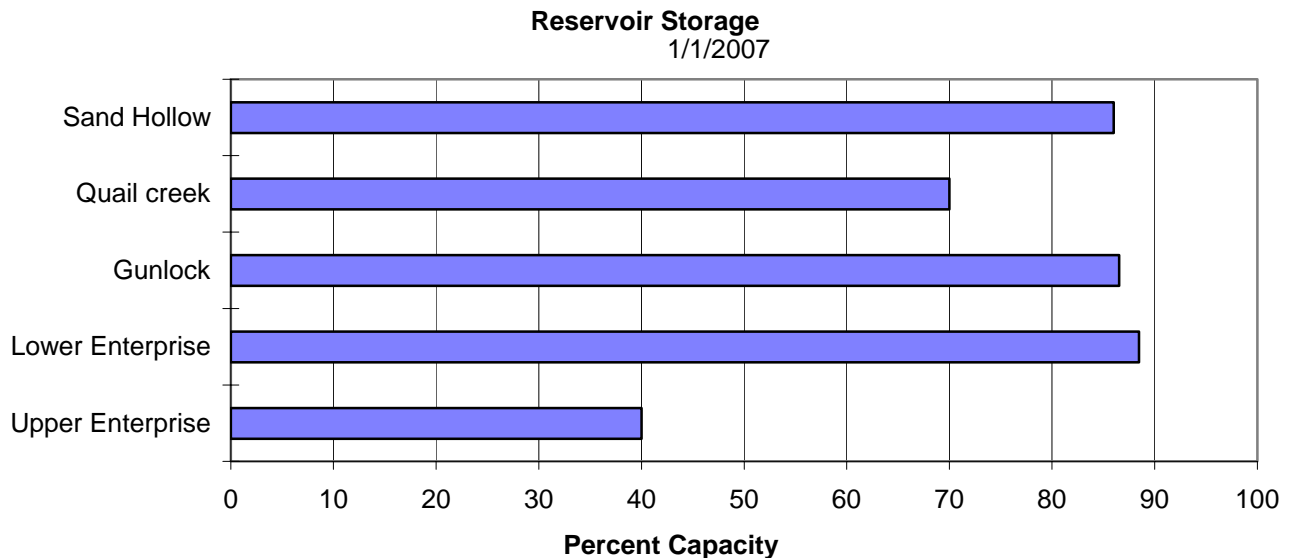
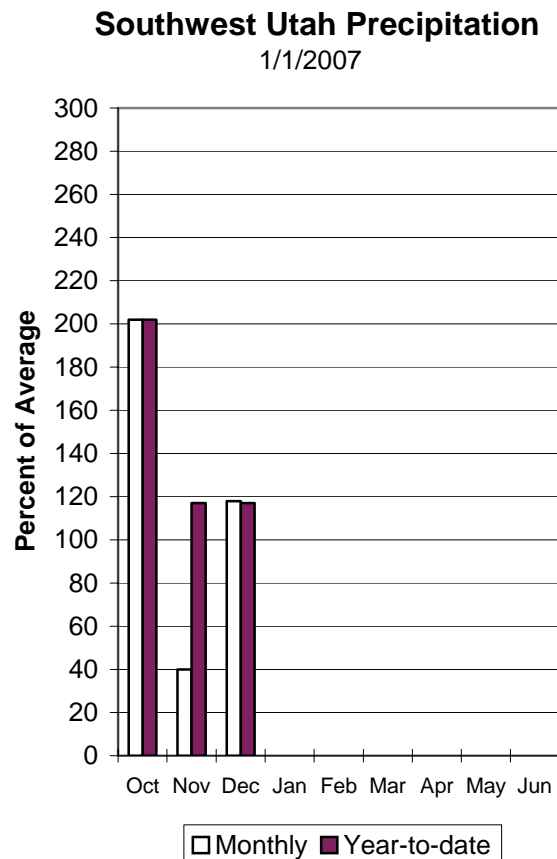
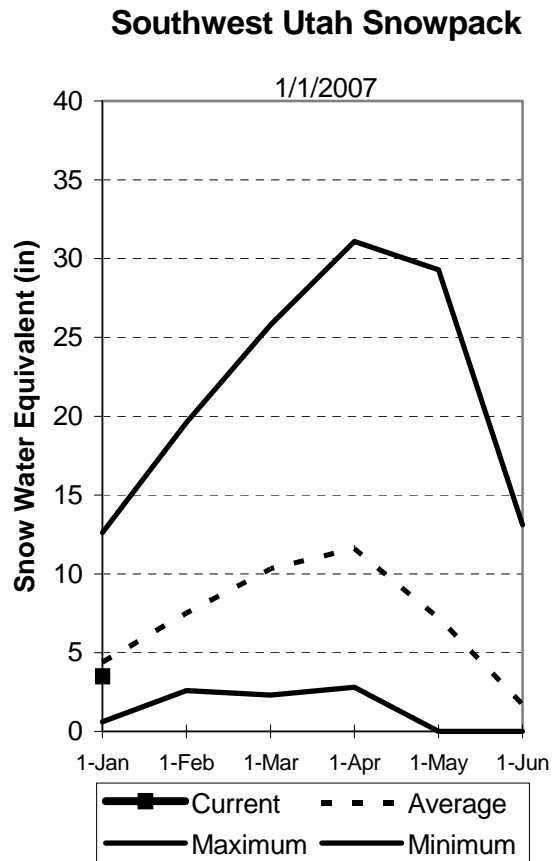
The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

E. Garfield, Kane, Washington, & Iron Co.

January 1, 2007

Snowpacks in this region are below normal at 80% of average, which is 198% of last year. Individual sites range from 60% to 150% of average. Precipitation was above normal during December at 118% of average, bringing the seasonal accumulation (Oct-Dec) to 117% of normal. Soil moisture estimates in runoff producing areas are at 33% of saturation in the upper 2 feet of soil compared to 27% last year. Forecast streamflows range from 70% to 75% of average. Reservoir storage is at 76% of capacity, 10% less than last year. The Surface Water Supply Index is at 67%, indicating slightly above normal water availability.



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E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Streamflow Forecasts - January 1, 2007

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Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		=====		Chance Of Exceeding *		=====		
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
Lake Powell Inflow (2)	APR-JUL	3600	5740	7200	91	8660	10800	7930
Virgin River at Virgin	APR-JUL	15.3	33	48	75	66	99	64
Virgin River near Hurricane	APR-JUL	10.0	31	52	75	78	127	69
Santa Clara River nr Pine Valley	APR-JUL	0.8	2.4	4.1	75	6.2	10.0	5.5
Coal Creek nr Cedar City	APR-JUL	6.7	11.7	18.0	93	21	29	19.3

E. GARFIELD, KANE, WASHINGTON, & IRON Co. Reservoir Storage (1000 AF) - End of December					E. GARFIELD, KANE, WASHINGTON, & IRON Co. Watershed Snowpack Analysis - January 1, 2007			
Reservoir	Usable Capacity	*** This Year	Usable Last Year	Storage Avg	Watershed	Number of Data Sites	This Year as % of Last Yr	% of Average
GUNLOCK	10.4	9.0	10.8	5.7	VIRGIN RIVER	5	182	80
LAKE POWELL	24322.0	12103.0	11604.0	---	PAROWAN	2	134	73
QUAIL CREEK	40.0	28.0	34.3	23.9	ENTERPRISE TO NEW HARMONY	2	183	67
UPPER ENTERPRISE	10.0	4.0	9.0	---	COAL CREEK	2	149	75
LOWER ENTERPRISE	2.6	2.3	0.0	26.7	ESCALANTE RIVER	2	215	87
					E. GARFIELD, KANE, WASHIN	9	186	80

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

**UTAH
SURFACE WATER SUPPLY INDEX
Snow Surveys NRCS USDA
Basin or Region SWSI/% Percentile Years with
1-Jan-07 Similar SWSI**

Bear River	-2.26	23%	02,06,90,62
Ogden River	-1.07	37%	70,66,76,94
Weber River	-1.52	32%	00,89,94,79
Provo	1.96	73%	74,96,80,69
West Uintah Basin	2.83	84%	01,00,99,97
East Uintah Basin	0.43	55%	00,06,97,87
Price River	1.67	70%	66,67,79,00
San Rafael	0.23	53%	00,74,05,82
Moab	0.30	54%	06,94,97,05
Upper Sevier River	1.76	71%	68,82,88,86
Lower Sevier River	0.60	57%	00,75,81,70
Beaver River	-0.17	48%	67,71,96,78
Virgin River	1.39	67%	94,00,06,92

Snow Surveys

**245 N Jimmy Doolittle Rd
Salt Lake City, UT
(801) 524-5213**

SWSI Scale: -4 to 4

**Percentile: 0 -
100%**

What is a Surface Water Supply Index?

The **Surface Water Supply Index (SWSI)** is a predictive indicator of total surface water availability within a watershed for the spring and summer water use seasons. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow which are based on current snowpack and other hydrologic variables. SWSI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry) with a value of zero (0) indicating median water supply as compared to historical analysis. SWSI's are calculated in this fashion to be consistent with other hydroclimatic indicators such as the Palmer Drought Index and the Precipitation index.

Utah Snow Surveys has also chosen to display the SWSI as a PERCENT CHANCE OF NON-EXCEEDANCE. While this is a very cumbersome name, it has the simplest application. It can be best thought of as a simple scale of 1 to 99 with 1 being the drought of record (driest possible conditions) and 99 being the flood of record (wettest possible conditions) and a value of 50 representing average conditions. This rating scale is a percentile rating as well, for example a SWSI of 75% means that this years water supply is greater than 75% of all historical events and that only 25% of the time has it been exceeded. Conversely a SWSI of 10% means that 90% of historical events have been greater than this one and that only 10% have had less total water supply. This scale is far more intuitive for most people and is totally comparable between basins: a SWSI of 50% means the same relative ranking on watershed A as it does on watershed B, which may not be strictly true of the +4 to -4 scale.

For more information on the SWSI go to: www.ut.nrcs.usda.gov/snow/ on the water supply page. The entire period of historical record for reservoir storage and streamflow is available.

S N O W C O U R S E D A T A

JANUARY 2007

SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
AGUA CANYON SNOTEL	8900	1/01	12	2.7	1.4	2.9
ALTA CENTRAL	8800	12/29	42	11.5	19.4	16.5
BEAVER DAMS SNOTEL	8000	1/01	16	2.9	4.4	4.3
BEAVER DIVIDE SNOTEL	8280	1/01	19	3.5	8.4	4.7
BEN LOMOND PK SNOTEL	8000	1/01	28	9.0	19.0	14.5
BEN LOMOND TR SNOTEL	6000	1/01	16	4.5	9.9	8.5
BEVAN'S CABIN	6450				-	4.2
BIG FLAT SNOTEL	10290	1/01	28	6.3	6.5	7.6
BIRCH CROSSING	8100				-	2.8
BLACK FLAT-U.M. CK S	9400	1/01	16	2.9	4.0	3.8
BLACK'S FORK GS-EF	9340				-	3.3
BLACK'S FORK JUNCTN	8930				-	3.7
BOX CREEK SNOTEL	9800	1/01	22	4.9	4.3	5.3
BRIAN HEAD	10000				-	8.2
BRIGHTON SNOTEL	8750	1/01	30	8.2	13.7	10.9
BRIGHTON CABIN	8700	12/29	38	8.8	12.7	11.5
BROWN DUCK SNOTEL	10600	1/01	35	6.9	10.1	7.7
BRYCE CANYON	8000				-	2.1
BUCK FLAT SNOTEL	9800	1/01	23	5.0	8.9	7.2
BUCK PASTURE	9700				-	-
BUCKBOARD FLAT	9000				-	5.4
BUG LAKE SNOTEL	7950	1/01	27	6.2	10.4	8.3
BURT'S-MILLER RANCH	7900				-	2.2
CAMP JACKSON SNOTEL	8600	1/01	14	1.8	.8	5.6
CASCADE MOUNTAIN SNO	7770	1/01	23	5.1	9.2	-
CASTLE VALLEY SNOTEL	9580	1/01	17	3.0	2.8	4.9
CHALK CK #1 SNOTEL	9100	1/01	37	10.0	13.9	10.1
CHALK CK #2 SNOTEL	8200	1/01	29	6.6	6.5	6.7
CHALK CREEK #3	7500				-	3.5
CHEPETA SNOTEL	10300	1/01	29	5.4	5.5	6.0
CLAYTON SPRINGS SNTL	10000	1/01	20	3.9	2.3	-
CLEAR CK RIDG #1 SNT	9200	1/01	21	4.5	8.9	7.7
CLEAR CK RIDG #2 SNT	8000	1/01	24	4.7	6.7	6.0
CORRAL	8200				-	-
CURRANT CREEK SNOTEL	8000	1/01	15	3.1	5.7	4.2
DANIELS-STRAWBERRY S	8000	1/01	22	5.0	7.8	6.5
DILL'S CAMP SNOTEL	9200	1/01	22	3.8	5.9	5.5
DONKEY RESERVOIR SNO	9800	1/01	23	4.3	1.6	4.0
DRY BREAD POND SNTL	8350	1/01	28	6.2	10.5	9.1
DRY FORK SNOTEL	7160	1/01	24	5.7	6.0	6.9
EAST WILLOW CREEK SN	8250	1/01	14	2.1	.9	2.9
FARMINGTON U. SNOTEL	8000	1/01	42	11.0	18.9	13.0
FARMINGTON LOWER SC	6950				-	10.4
FARMINGTON L. SNOTEL	6780	1/01	24	6.3	10.2	-
FARNSWORTH LK SNOTEL	9600	1/01	38	8.4	5.7	8.0
FISH LAKE	8700				-	2.9
FIVE POINTS LAKE SNO	10920	1/01	28	7.1	8.5	7.0
G.B.R.C. HEADQUARTER	8700				-	-
G.B.R.C. MEADOWS	10000				-	9.7
GARDEN CITY SUMMIT	7600				-	6.5
GARDNER PEAK SNOTEL	8350	1/01	14	2.9	2.4	-
GEORGE CREEK	8840				-	-
GOOSEBERRY R.S.	8400				-	5.1
GOOSEBERRY R.S. SNTL	7900	1/01	17	3.0	3.7	3.6
GUTZ PEAK SNOTEL	6820	1/01	7	1.7	.4	-
HARDSCRABBLE SNOTEL	7250	1/01	24	6.4	11.7	6.5
HARRIS FLAT SNOTEL	7700	1/01	6	1.5	.5	2.5
HAYDEN FORK SNOTEL	9100	1/01	24	5.0	9.7	6.3
HENRY'S FORK	10000				-	-
HEWINTA SNOTEL	9500	1/01	24	4.0	5.3	4.1
HICKERSON PARK SNTL	9100	1/01	23	3.3	1.4	2.9
HIDDEN SPRINGS	5500	12/27	6	1.2	3.1	.2
HOBBLE CREEK SUMMIT	7420				-	6.1
HOLE-IN-ROCK SNOTEL	9150	1/01	25	3.8	3.7	2.7
HORSE RIDGE SNOTEL	8260	1/01	30	6.9	13.2	9.3
HUNTINGTON-HORSESHOE	9800				-	9.7
INDIAN CANYON SNOTEL	9100	1/01	19	4.2	3.9	4.4
JOHNSON VALLEY	8850				-	2.7

SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
JONES CORRAL G.S.	9720				-	-
KILFOIL CREEK	7300				-	5.5
KILLYON CANYON	6300	12/27	8	1.4	4.8	5.1
KIMBERLY MINE SNOTEL	9300	1/01	25	5.5	3.9	6.0
KING'S CABIN SNOTEL	8730	1/01	20	3.1	2.4	5.0
KLONDIKE NARROWS	7400				-	7.5
KOLOB SNOTEL	9250	1/01	26	5.5	2.5	6.9
LAKEFORK #1 SNOTEL	10100	1/01	21	4.8	5.4	5.6
LAKEFORK BASIN SNTL	10900	1/01	33	6.7	10.6	8.2
LAKEFORK MOUNTAIN #3	8400				-	2.8
LAMBS CANYON	7400	12/28	30	6.6	7.3	7.4
LASAL MOUNTAIN LOWER	8800				-	3.8
LASAL MOUNTAIN SNTL	9850	1/01	15	3.8	3.8	4.7
LIGHTNING RIDGE SNTL	8220	1/01	25	6.2	10.9	-
LILY LAKE SNOTEL	9050	1/01	31	5.6	6.8	5.5
LITTLE BEAR LOWER	6000				-	4.3
LITTLE BEAR SNOTEL	6550	1/01	13	3.0	5.1	5.2
LITTLE GRASSY SNOTEL	6100	1/01	5	1.4	.4	2.1
LONG FLAT SNOTEL	8000	1/01	12	1.9	1.4	2.8
LONG VALLEY JCT. SNT	7500	1/01	12	2.7	.7	1.8
LOOKOUT PEAK SNOTEL	8200	1/01	34	9.1	16.5	9.9
LOST CREEK RESERVOIR	6130				-	2.0
LOUIS MEADOW SNOTEL	6700	1/01	26	7.3	11.4	-
MAMMOTH-COTTONWD SNT	8800	1/01	23	4.8	9.5	7.6
MERCHANT VALLEY SNTL	8750	1/01	17	2.9	3.8	5.4
MIDDLE CANYON	7000				-	5.9
MIDWAY VALLEY SNOTEL	9800	1/01	33	7.2	4.8	9.0
MILL CREEK	6950	12/28	28	6.1	7.3	8.3
MILL-D NORTH SNOTEL	8960	1/01	29	6.5	14.3	10.3
MILL-D SOUTH FORK	7400	12/27	27	6.2	10.4	8.6
MINING FORK SNOTEL	8000	1/01	25	6.2	6.8	5.5
MONTE CRISTO SNOTEL	8960	1/01	37	9.5	14.0	11.0
MOSBY MTN. SNOTEL	9500	1/01	25	4.4	4.8	5.1
MT.BALDY R.S.	9500				-	9.9
MUD CREEK #2	8600				-	5.3
OAK CREEK	7760				-	-
PANGUITCH LAKE R.S.	8200				-	-
PARLEY'S CANYON SNTL	7500	1/01	25	5.5	8.9	7.2
PARRISH CREEK SNOTEL	7740	1/01	32	8.6	12.1	-
PAYSON R.S. SNOTEL	8050	1/01	18	4.9	6.9	7.2
PICKLE KEG SNOTEL	9600	1/01	23	5.2	7.0	6.2
PINE CREEK SNOTEL	8800	1/01	34	6.9	5.3	8.8
RED PINE RIDGE SNTL	9200	1/01	22	4.1	7.7	6.7
REDDEN MINE LOWER	8500				-	6.7
REES'S FLAT	7300				-	5.6
ROCK CREEK SNOTEL	7900	1/01	16	3.3	5.2	3.7
ROCKY BN-SETTLEMT SN	8900	1/01	29	7.4	6.8	10.0
SEELEY CREEK SNOTEL	10000	1/01	21	5.6	6.5	6.4
SMITH MOREHOUSE SNTL	7600	1/01	23	5.4	7.4	5.7
SNOWBIRD SNOTEL	9700	1/01	36	9.1	20.3	13.2
SPIRIT LAKE	10300				-	5.5
SQUAW SPRINGS	9300				-	3.2
STEEL CREEK PARK SNO	10100	1/01	29	6.2	7.4	6.7
STILLWATER CAMP	8550				-	3.9
STRAWBERRY DIVIDE SN	8400	1/01	25	5.1	7.4	7.4
SUSC RANCH	8200				-	2.8
TALL POLES	8800				-	5.3
TEMPLE FORK SNOTEL	7410	1/01	25	5.0	10.2	-
THAYNES CANYON SNTL	9200	1/01	35	8.5	12.8	9.0
THISTLE FLAT	8500				-	-
TIMBERLINE	9100				-	-
TIMPANOGOS DIVIDE SN	8140	1/01	28	5.7	10.7	9.2
TONY GROVE LK SNOTEL	8400	1/01	44	12.4	23.3	14.3
TONY GROVE R.S.	6250				-	5.0
TRIAL LAKE	9960				-	9.8
TRIAL LAKE SNOTEL	9960	1/01	31	5.8	15.6	10.5
TROUT CREEK SNOTEL	9400	1/01	21	4.5	2.5	4.2
UPPER JOES VALLEY	8900				-	4.1
VERNON CREEK SNOTEL	7500	1/01	14	2.3	2.3	4.0
VIPONT	7670				-	-
WEBSTER FLAT SNOTEL	9200	1/01	20	4.0	2.7	6.0
WHITE RIVER #1 SNTL	8550	1/01	21	3.1	5.2	5.2
WHITE RIVER #3	7400				-	3.5
WIDTSOE #3 SNOTEL	9500	1/01	19	3.0	1.3	4.4
WRIGLEY CREEK	9000				-	4.3
YANKEE RESERVOIR	8700				-	3.7



Issued by

Arlen Lancaster
Chief
Natural Resources Conservation Service
U.S. Department of Agriculture

Released by

Sylvia Gillen
State Conservationist
Natural Resources Conservation Service
Salt Lake City, Utah

Prepared by

Snow Survey Staff
Randall Julander, Supervisor
Ray Wilson, Hydrologist
Timothy Bardsley, Hydrologist
Mike Bricco, Hydrologist
Brooke Nelson, Hydrologist
Bob Nault, Electronics Technician

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Snow Survey, NRCS, USDA
245 North Jimmy Doolittle Road
Salt Lake City, UT 84116
(801) 524-5213



Utah Water Supply Outlook Report

Natural Resources Conservation Service
Salt Lake City, UT

